WHAT IS CLAIMED IS:

1. A method for fabricating a semiconductor laser device which emits a plurality of laser beams of different wavelengths, comprising:

a first process for fabricating a first intermediate body on a semiconductor substrate, including a step of forming a first multi-layer stack having a semiconductor for forming a first lasing portion;

a second process for fabricating a second intermediate body on a support substrate, including a step of forming a second multi-layer stack of a semiconductor for forming a second lasing portion and a step of forming a groove in said second multi-layer stack;

a third process for fabricating a bonded body by securely adhering a face of said first intermediate body on a side of said first multi-layer stack to a face of said second intermediate body on a side of said second multi-layer stack side via an electrically conductive adherent layer; and

a fourth process for irradiating said second multi-layer stack with light through said support substrate of said bonded body to separate said support substrate and said second multi-layer stack from each other.

2. The method for fabricating a semiconductor laser device according to claim 1, wherein

said light passes through said support substrate and is

absorbed by said second multi-layer stack in the vicinity of an interface with said support substrate.

3. A method for fabricating a semiconductor laser device which emits a plurality of laser beams of different wavelengths, comprising:

a first process for fabricating a first intermediate body on a semiconductor substrate, including a step of forming a first multi-layer stack having a semiconductor for forming a first lasing portion;

a second process for fabricating a second intermediate body on a support substrate, including a step of forming a layer containing at least a light absorption layer, a step of forming a second multi-layer stack of a semiconductor for forming a second lasing portion on said light absorption layer, and a step of forming a groove in said second multi-layer stack;

a third process for fabricating a bonded body by securely adhering a face of said first intermediate body on a side of said first multi-layer stack to a face of said second intermediate body on a side of said second multi-layer stack via an electrically conductive adherent layer; and

a fourth process for decomposing said light absorption layer by irradiating said light absorption layer with light through said support substrate of said bonded body to strip off at least said support substrate along said decomposed light absorption layer.

4. The method for fabricating a semiconductor laser device

according to claim 3, wherein

in said second process, said groove is formed to be deeper than a depth from a surface of said second multi-layer stack to said light absorption layer.

5. The method for fabricating a semiconductor laser device according to claim 3 or 4, wherein

said light passes through said support substrate and is absorbed by said light absorption layer.

6. The method for fabricating a semiconductor laser device according to any one of claims 1 to 5, wherein

at least one of said first process and said second process includes a process for forming said adherent layer on at least one of the face of said first intermediate body on the side of said first multi-layer stack and the face of said second intermediate body on the side of said second multi-layer stack.

7. The method for fabricating a semiconductor laser device according to any one of claims 1 to 6, wherein:

said first multi-layer stack has a III-V compound semiconductor containing any one of arsenic (As), phosphorus (P), and antimony (Sb) as a group V element or a II-VI compound semiconductor; and

said second multi-layer stack has a nitride-based III-V compound semiconductor with the group V element being nitrogen (N).

8. The method for fabricating a semiconductor laser device

according to any one of claims 1 to 7, wherein

said adherent layer is of a metal.